CLAIMS

1- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, in whose side exists at least an opening which defines a fenestration for a derivation of the flow stream of corporal fluid from the interior of the tubular body towards the exterior, characterized because the said fenestration is inscribed in a portion of the wall of the tubular body which defines a first arched surface of protruding convexity towards outside from the said portion of wall, defining this first surface an enlarged shell and non deformable under normal demands of force, with its major axis situated according to a generatrix of the side wall and situated between both ends of the tubular body. This first arched surface determines in its intersection with the side surface of the tubular body from which it projects, a perimeter of an oval shape and the said fenestration is inscribed in the lower end of the said first arched surface, downstream considering the sense of the flow of corporeal fluid along the tubular body. This first arched surface and the said fenestration are covered internally the tubular body by a second arched surface displayed between the interior of the tubular body and the first arched surface, being both the first and second surfaces only related between them through the same oval perimeter in the tubular body, showing both arched surfaces mutually confronted the same development and identical transversal sections. This second arched surface has an opening inscribed inside of the same oval perimeter, which communicates the interior of the tubular body with the space defined between both arched surfaces, but situated in its opposite end to the inscribed fenestration in the referred first arched surface and situated upstream respect to the sense of flow of the corporeal fluid inside the tubular body. The first arched surface projects outside the side wall of the tubular body and remains immovable and without changing shape, while the oval perimetral union defined between both arched surfaces defines a zone of hinge for the second arched surface respect to the first, being this second surface elastically deformable around the said perimeter, retaining two stable operative positions with elastic recovery of its previous shape. In the first of the s said operative positions, the second arched surface projects its convexity to the interior of the tubular body, being a convexity the opposite sign to the first arched surface, establishing a passage for the flow of the corporeal fluid between both arched surfaces, communicating the interior of the tubular body through the said opening with its passage, which communicates with the referred fenestration being all the transversal sections of both arched surfaces confronted equally and of opposite sign. In the second position the said second surface acquires a convexity of equal sign of that of the first arched surface and settles against the inner surface of the first surface causing the closing of the passage between both surface with a relation of a seal and closing this fenestration and this opening in its respective surfaces; having in the interior of the second surface a means capable of displacing this second arched surface between its two mentioned operative positions; being the referred tubular body and both arched surfaces made of a waterproof material to the flow of the corporeal fluid.

2- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was claimed in 1, characterized because the tubular body is a tube in a polymeric material in which a piece of its side changes its shape, projecting itself towards outside the first arched surface; being the said

first surface substantially rigid and without changing shape to the demands of exercise of the referred tube.

3- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was claimed in 2, characterized because the referred tube is soft and a piece of it which defines the first arched surface has an elastic resistance to deformation of grader magnitude than the rest of the tube, settling the second arched surface on a structure substantially non deformable and which settles in the interior of the referred tube, in correspondence and confronting the concavity of the first arched surface.

4- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to any of the claim 1 to 3 characterized because at least the first and second arched surface include a layer of a polymeric material, inside which a mesh of one chosen filaments is arranged among textile filaments and metallic filaments.

5- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was in claimed 1, characterized because the said tubular piece includes a stent defined by a mesh of threads or metallic threads covered with a polymeric waterproof material, being the second arched surface defined by another piece of mesh of filaments or metallic threads covered by a waterproof polymeric material, determining this unit elastically deformable walls previous to the placement in the patient.

6- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was claimed in 1 to 5, characterized because both first and second arched surfaces have surfaces of polymeric material mutually confronted and only related between them through the joint hermetic perimeter of the polymeric material coincident with the same oval perimeter in the tubular body, establishing the zone of hinge of the second surface respect to the referred oval perimeter.

7- Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was claimed in 5; characterized because both first an second surfaces are only related between them through the join of the metallic mesh along the oval perimeter of hinge, defining the continuity of the polymeric material in contact with a hermetic perimeter hinge which coincides with the same oval perimeter in the tubular body; establishing the zone of hinge of the second surface respect to the first in the said oval perimeter.

8-Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was claimed in 1 to 7, characterized because the means capable of displacing the second arched surface between its two mentioned operative positions and disposed in the interior of the second surface, consists in a protruding hook of this second surface and projecting in the interior of the tubular body.

9-Fenestration with intrinsic means of selective closure, incorporated to a tubular body and used in cardiovascular interventions, according to what was claimed in 1 to 8, characterized because the tubular body has an interior diameter from 16 to 22 mm, being the length of the major axis of the oval perimeter from 15 to 20 mm; the opening in the second arched surface which communicates the interior of the tubular body and the passage defined between both arches surfaces has a maximum transversal distance from 5 to 7 mm, and the fenestration in the first arched surface has a length according to the major axis of the perimeter from 3 to 6 mm; being the profile of the said opening in the second arched surface of curved shape and growing towards the superior end of the said oval perimeter.

SUMMARY OF INVENTION

Fenestration with intrinsic means of selective closure incorporated to a tubular body and used in cardiovascular interventions, which includes giving a piece of the lateral of the said tubular body with a first protruding arched surface projecting outside it, which in its inferior end has a fenestration.

This first surface intersects the tubular body describing a closed perimeter of a substantially oval shape.

Internally to this first surface and facing it there is a second arched surface which has in its superior end an opening which communicates with the interior of the tubular body, having both surfaces in this way facing each other, identical transversal sections and an identical development, being both surfaces related between them around the said perimeter, being the second surface capable of deformed elastically around this perimeter, until it changes the sign and sense of its convexity.

In the position of both surfaces with their confronted convexities and of opposite signs, a passage is established between both surfaces which communicates the interior of the tubular body with the exterior, determining this passage between both surfaces a derivation of the caudal flowing through the interior of the tubular body, while in the position of both surfaces with their convexities of the same sign, both arched surfaces are mutually attached and in contact with a sealed relation, closing at the same time the corresponding windows in each of the surfaces and the passage between them is eliminated, finishing the shunt.

The second arched surface has means of hooking which project from it towards the interior of the tubular body.

Each section of the conduit and of the arched surfaces is impermeable to the flow of the fluids.